

ATTORNEY DOCKET NO.
073338.0187
(04-50459 FLA)

PATENT APPLICATION
10/807,561

- 1 -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Marvit, et al.
Serial No.: 10/807,561
Filing Date: March 23, 2004
Confirmation No. 8346
Group Art Unit: 2629
Examiner: Regina Liang
Title: *Selective Engagement of Motion Input Modes*

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ELECTRONICALLY FILED
WITH THE USPTO ON
July 7, 2008

Dear Sir:

APPEAL BRIEF

Appellants have appealed to the Board of Patent Appeals and Interferences (the "Board") from the decision of the Examiner transmitted on January 15, 2008 and the Advisory Action transmitted on March 31, 2008, finally rejecting Claims 1-20. Appellants filed a Notice of Appeal on April 7, 2008.

ATTORNEY DOCKET NO.
073338.0187
(04-50459 FLA)

PATENT APPLICATION
10/807,561

– 2 –

Real Party In Interest

This application is currently owned by Fujitsu Limited as indicated by an assignment recorded on December 22, 2004 in the Assignment Records of the United States Patent and Trademark Office at Reel/Frame 016111/0451.

Related Appeals and Interferences

Application serial no. 10/807,562, currently on appeal, may directly affect or be directly affected by or have a bearing on the Board's decision regarding this Appeal, as the issues raised therein with respect to some of the claim rejections are similar to those raised in this Appeal for at least some of the rejected claims.

To the knowledge of Appellants' counsel, there are no other known appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision regarding this Appeal.

Status of Claims

Claims 1-20 are pending in the Application and stand rejected pursuant to a final Office Action transmitted January 15, 2008 (the "Office Action") and Advisory Action transmitted March 31, 2008 and are all presented for appeal. All claims presented for appeal are shown in Appendix A, attached hereto, along with an indication of the status of those claims.

ATTORNEY DOCKET NO.
073338.0187
(04-50459 FLA)

PATENT APPLICATION
10/807,561

– 5 –

Status of Amendments

All amendments submitted by Appellants have been entered by the Examiner.

Summary of Claimed Subject Matter

Claim 1 of the present application recites a motion controlled handheld device. The device includes a display having a viewable surface and operable to generate a current image (as an example only and not by way of limitation, see Figures 1; Page 7, Lines 14-22). The device includes a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device (as an example only and not by way of limitation, see Figure 1; Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4). The device includes a gesture mapping database comprising a mapping of each of the gestures to an associated command (as an example only and not by way of limitation, see Figures 1 and 15; Page 38, Line 30 – Page 40, Line 13). The device also includes a motion detection module operable to detect motion of the device within three dimensions and to identify components of the motion in relation to the viewable surface (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The device includes a display control module having a first mode of motion input operation and a second mode of motion input operation (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The display control module is operable in the first mode of motion input operation to monitor the motion of the device, to determine a location of the device resulting from the motion, and to modify the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The display control module is operable in the second mode of motion input operation to monitor the motion of the device, to track movement of the handheld device using the motion detection module, the tracked movement identifying a path traveled by the device, to compare the path with the gestures to identify a matching gesture, to identify one of the commands associated with the matching gesture, and to modify the current image based on the identified command (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The device includes a mode selection module operable to detect a mode selection trigger and to switch between the first mode of motion input operation and the second mode of motion input operation in response to detecting the mode selection trigger (as an example only and not by way of limitation, see Page 21, Lines 10– 32).

Claim 10 recites a method for controlling a handheld device. The method includes generating a current image on a viewable surface of the handheld device (as an example only and not by way of limitation, see Figures 1; Page 7, Lines 14-22). The method includes maintaining a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device (as an example only and not by way of limitation, see Figure 1; Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4). The method includes maintaining a gesture mapping database comprising a mapping of each of the gestures to an associated command (as an example only and not by way of limitation, see Figures 1 and 15; Page 38, Line 30 – Page 40, Line 13). The method includes detecting motion of the device within three dimensions (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The method includes identifying components of the motion in relation to the viewable surface (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The method includes, in a first mode of motion input operation, monitoring the motion of the device, determining a location of the device resulting from the motion, and modifying the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The method includes, in a second mode of motion input operation monitoring the motion of the device, tracking movement of the handheld device, comparing the tracked movement with the gestures to identify a matching gesture, identifying one of the commands associated with the matching gesture, and modifying the current image based on the identified command (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The method includes detecting a mode selection trigger (as an example only and not by way of limitation, see Page 21, Lines 10– 32). The method includes switching between the first mode of motion input_operation and the second mode of motion input_operation in response to detecting the mode selection trigger (as an example only and not by way of limitation, see Page 21, Lines 10– 32).

Claim 16 recites logic for controlling a handheld device, the logic embodied as a computer program stored on a computer readable medium and operable when executed to

perform the step of generating a current image on a viewable surface of the handheld device (as an example only and not by way of limitation, see Figures 1; Page 7, Lines 14-22). The logic is also operable to perform the steps of maintaining a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device (as an example only and not by way of limitation, see Figure 1; Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4) and maintaining a gesture mapping database comprising a mapping of each of the gestures to an associated command (as an example only and not by way of limitation, see Figures 1 and 15; Page 38, Line 30 – Page 40, Line 13). The logic is also operable to perform the steps of detecting motion of the device within three dimensions and identifying components of the motion in relation to the viewable surface (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The logic is also operable to perform the steps of, in a first mode of motion input operation, monitoring the motion of the device, determining a location of the device resulting from the motion, and modifying the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The logic is also operable to perform the steps of, in a second mode of motion input operation monitoring the motion of the device, tracking movement of the handheld device, comparing the tracked movement with the gestures to identify a matching gesture, identifying one of the commands associated with the matching gesture, and modifying the current image based on the identified command (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The logic is also operable to perform the steps of detecting a mode selection trigger and switching between the first mode of motion input operation and the second mode of motion input_operation in response to detecting the mode selection trigger (as an example only and not by way of limitation, see Page 21, Lines 10– 32).

Claim 20 recites a motion controlled handheld device. The device includes means for generating a current image on a viewable surface of the handheld device (as an example only and not by way of limitation, see Figures 1; Page 7, Lines 14-22). The device includes means for maintaining a gesture database maintaining a plurality of gestures, each gesture defined

by a motion of the device with respect to a first position of the device (as an example only and not by way of limitation, see Figure 1; Page 7, Line 28 – Page 8, Line 8; Page 8, Line 18 – Page 9, Line 4). The device includes means for maintaining a gesture mapping database comprising a mapping of each of the gestures to an associated command (as an example only and not by way of limitation, see Figures 1 and 15; Page 38, Line 30 – Page 40, Line 13). The device includes means for detecting motion of the device within three dimensions. The device includes means for identifying components of the motion in relation to the viewable surface (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The device includes means for, in a first mode of motion input operation, monitoring the motion of the device, determining a location of the device resulting from the motion, and modifying the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The device includes means for, in a second mode of motion input operation monitoring the motion of the device, tracking movement of the handheld device, comparing the tracked movement with the gestures to identify a matching gesture, identifying one of the commands associated with the matching gesture, and modifying the current image based on the identified command (as an example only and not by way of limitation, see Figure 1; Page 8, Line 9 – Page 9, Line 4). The device includes means for detecting a mode selection trigger. The device includes means for switching between the first mode of motion input operation and the second mode of motion input operation in response to detecting the mode selection trigger (as an example only and not by way of limitation, see Page 21, Lines 10– 32).

Grounds of Rejection to be Reviewed on Appeal

Appellants request that the Board review the Examiner's rejections of Claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,598,187 to Ide ("*Ide*") in view of WO 01/86920 to Lapidot ("*Lapidot*").

Argument

The Office Action rejects Claims 1-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,598,187 to Ide ("*Ide*") in view of WO 01/86920 to Lapidot ("*Lapidot*").

The Rejections of Claims 1-20 are Improper

I. Claims 1-2, 5, 7, 9-11, and 14-20 are patentable over Ide-Lapidot

A. The Proposed Combination of Ide and Lapidot is Improper

Claim 1 recites a motion controlled handheld device comprising:

- a display having a viewable surface and operable to generate a current image;

- a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device;

- a gesture mapping database comprising a mapping of each of the gestures to an associated command;

- a motion detection module operable to detect motion of the device within three dimensions and to identify components of the motion in relation to the viewable surface;

- a display control module having a first mode of motion input operation and a second mode of motion input operation;

- the display control module operable in the first mode of motion input operation to monitor the motion of the device, to determine a location of the device resulting from the motion, and to modify the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device;

- the display control module operable in the second mode of motion input operation to monitor the motion of the device, to track movement of the handheld device using the motion detection module, the tracked movement identifying a path traveled by the device, to compare the path with the gestures to identify a matching gesture, to identify one of the commands associated with the matching gesture, and to modify the current image based on the identified command; and

- a mode selection module operable to detect a mode selection trigger and to switch between the first mode of motion input operation and the second mode of motion input operation in response to detecting the mode selection trigger.

Claims 10, 16, and 20 recite similar elements. The Office Action states that *Ide* does not disclose a handheld device comprising a display but that *Lapidot* teaches a handheld device

"with a display screen for controlling the information presented in its display." Office Action, page 3. The Office Action then states:

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the motion controlled handheld device of *Ide* to have a display as taught by *Lapidot* so as to []provide improved handheld portable devices and a method for conveniently controlling the function of such devices and the presentation of information in their display.

Id. Appellants respectfully submit that the combination of *Ide* and *Lapidot* proposed by the Examiner is improper because it would not be obvious to combine *Ide* and *Lapidot* in the manner the Examiner proposes.

1. The Obviousness Standard

To establish a *prima facie* case of obviousness, the references must teach or suggest all elements of the rejected claims and it must have been obvious to one of ordinary skill in the art at the time of invention to combine or modify the references. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007); *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

In *KSR Int'l Co. v. Teleflex Inc.*, the Supreme Court clarified the appropriate standard to use when determining obviousness. "The [obviousness] analysis is objective: 'Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined.'" *Id.* at 1734 (citing *Graham v. John Deere*, 383 U.S. 1, 17-18, 148 U.S.P.Q. 459 (1966)).

A "principal reason for declining to allow patents for what is obvious" is to prevent individuals from obtaining a patent "for a combination which only unites old elements with no change in their respective functions." *Id.* at 1739. However, the Supreme Court clarified that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *Id.* at 1741. "[A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 1731. While not a rigid test, a showing of a "teaching, suggestion, or motivation" to combine or modify prior art provides helpful insight

in determining whether it would have been obvious to combine references. *Id.* "A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *Id.* at 1742. (citing *Graham*, 383 U.S. at 36).

The new examination guidelines issued by the United States Patent and Trademark Office ("PTO") in response to the *KSR* decision further emphasize the importance of an explicit, articulated reason why the claimed invention is obvious. Those guidelines state, in part, that "[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." *Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57526, 57528-29 (Oct. 10, 2007) (internal citations omitted). The guidelines further describe a number of rationales that, in the PTO's view, can support a finding of obviousness. *Id.* at 57529-34. The guidelines set forth a number of particular findings of fact that must be made and explained by the Examiner to support a finding of obviousness based on one of those rationales. *See id.*

Furthermore, the M.P.E.P. explicitly states, "[i]f [the] proposed modification would render the prior art invention being modified ***unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.***" M.P.E.P. § 2143.03, *citing In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) (emphasis added); *see also KSR*, 127 S.Ct. at 1739 (when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious).

2. It Would Not be Obvious to Combine *Ide* and *Lapidot*

According to the Examiner, "it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the handheld device of *Ide* to have a display as taught by *Lapidot* so as to []provide improved hand-held portable devices and a method for conveniently controlling the function of such devices and the presentation of information in their display." Office Action, p. 3. Appellants respectfully submit that the

Examiner's assertion that it would have been obvious to combine the teachings of *Ide* with the teachings of *Lapidot* to purportedly arrive at Appellants' invention is entirely insufficient to support a *prima facie* case of obviousness under 35 U.S.C. 103(a) under the M.P.E.P. and the governing Federal Circuit case law.

As indicated above, the Examiner's proposed combination is to place a display on the handheld device of *Ide* so that a user can control device functionality and presentation of information in a display. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. See M.P.E.P. § 2143.01. "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, at 1741 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Thus, the fact that the teachings of one reference would improve the teachings of another reference does not provide the required suggestion to combine or modify. If a proposed modification would render the prior art invention being modified ***unsatisfactory for its intended purpose***, then there is no suggestion or motivation to make the proposed modification. See M.P.E.P. § 2143.01. Even if *Lapidot* does provide for a monitor on a control device, *Ide* ***clearly teaches away*** from any combination that places a monitor on its spatial control device as described in *Ide*. *Ide* refers to its input device as a "spatial control mouse" and repeatedly thereafter as a "mouse." A conventional mouse (for example, the well-known ball mouse or optical mouse used with a personal computer) does not include a built-in display. A mouse is typically used to move a cursor on a screen. As *Ide* states, "the operator moves the mouse on the desk to move the cursor interlocking with the mouse movement to the desired object . . . appearing on the display. With the cursor positioned over the desired object on the display, he clicks (or releases) an acknowledge switch called a click button of the mouse to enter data to the system." *Ide*, col. 1, lines 21-28. Thus, when using the mouse, the user watches the screen to track the movement of the cursor while the user's hand is on the mouse. There is therefore ***no motivation*** to put a viewable display on the mouse because the user rarely has reason to look away from the screen and toward the mouse while using the mouse. Using a three-dimensional input device as described by *Ide* is similar. *Ide* says, "[t]he operator moves the

three-dimensional input device in space to move the cursor interlocking with the movement of the input device to the desired object on the screen." *Ide*, col. 1, lines 52-58. Because of these well-known attributes of its use, there is ***no motivation*** to include a viewable display on an input device as described by *Ide*, and the cited references ***teach away*** from such a combination.

In response, the Office Action states that Appellants' remarks are misleading and not persuasive because the mouse of *Ide* is not a conventional mouse since "it also controls multi functions of a multimedia TV or a computer." Office Action, pages 5-6. However, despite these teachings in *Ide*, Appellants' contention that *Ide* teaches away from a combination with *Lapidot* is still valid. As described in *Ide*, the spatial control device is used to move a cursor on a screen. As *Ide* states, "the operator moves the mouse on the desk to move the cursor interlocking with the mouse movement to the desired object . . . appearing on the display. With the cursor positioned over the desired object on the display, he clicks (or releases) an acknowledge switch called a click button of the mouse to enter data to the system." *Ide*, col. 1, lines 21-28. Thus, when using the mouse, the user watches the screen to track the movement of the cursor while the user's hand is on the mouse. There is therefore no motivation to include a viewable display on an input device as described by *Ide*, and the cited references teach away from such a combination.

The Examiner argues otherwise because, the Examiner contends,:

Ide's "spatial control mouse" not only controls the cursor on a screen of a PC (Fig. 3), it also controls multi functions of a multimedia TV or a computer (e.g. see Figs. 12, 17, 33). Clearly, *Ide*'s "spatial control mouse" is a multi-functions handheld remote controller and not just a mouse as erroneously alleged by applicant.

Office Action, page 6. However, despite the fact that *Ide* discloses that its mouse can control a television and other devices, the mouse is ***still operating in the conventional manner*** in this disclosure with respect to the way it controls a cursor on those devices. For example, Figure 12 of *Ide* discloses a multimedia television controlled by the mouse. *Ide* discloses here that the mouse is still controlling a cursor on screen 122 of the television:

- 16 -

[W]hen the operator presses the cursor button 114 of the mouse with his first finger (e.g., the thumb), a cursor appears on the screen 122. Moving the mouse body 111, the operator moves the cursor to an object to be clicked. Then, he presses the click button 117 with his second finger (e.g., the index finger or the middle finger).

Using the screen examples of FIGS. 13A to 13D, an example of operating the spatial control image system will be described. It is assumed that the contents of channel A are displayed on the screen. The state in such a screen is shown in FIG. 13A. For instance, when the operator wants to see channel D on the screen, he first clicks the cursor button 114. Then, an input screen 124 appears as shown in FIG. 13B. At this time, characters A to F indicating channels appear on the input screen 124. The current channel A is enclosed by a square cursor. The operator moves the mouse to move the cursor to character D as shown in FIG. 13C. Thereafter, he presses the click button 117 and then the cursor button 114. Then, the channel is changed as shown in FIG. 13D, and the input screen 124 disappears.

Such an operation can be applied to various actions such as volume control or hue adjustment, in addition to channel selection. As described above, use of the spatial control mouse of the invention allows the operator to perform an input operation *while watching the television screen* differently from when a conventional button-operated infrared remote-control device with many function keys is used. Thus, the operator is freed from memorizing the functions of many buttons and troublesome button operations. Namely, the spatial control mouse provides a very easy operation environment for the operator to use.

Ide, Figures 12, 13A, 13B, 13C, 13D and col. 11, lines 8-45 (emphasis added). Thus, the device being controlled in this case still has a screen to view to control the device with the mouse thereby teaching away from any need for a display on the mouse.

Similarly, Figure 17 of *Ide* cited by the Examiner discloses a display unit 202 with a screen 203 that is viewed to control the display unit with the mouse:

For example, the function shown in FIG. 17 can be realized. FIG. 17 shows an example of an input operation using a spatial motion pattern of the invention. As shown in the figure, the operator can move the spatial control mouse 1 from a to b and to c in a triangle to select a triangle item from the choices displayed on the screen 203 of a display unit 202.

Ide, Figure 17 and col. 16, lines 13-22.

Finally, Figure 33 of *Ide* cited by the Examiner also discloses a screen 203 on a display unit 202 to be viewed while using the mouse:

FIG. 33 shows a method of inputting motion patterns in three-dimensional movements. The operator can draw a triangular pyramid on the screen 203 of a display unit 202 by moving the mouse 1 in a triangular pyramid, starting with a, and passing through b, c, c, e, and f in that order.

Ide, Figure 33 and col. 22, lines 6-10.

Thus, *Ide* discloses a mouse controlling various devices with screens that the user of the mouse can view to perform the control, such as moving a cursor around the screen. *Ide*'s disclosure ***clearly teaches away*** from a combination with *Lapidot* that would place a monitor on the mouse because there is no motivation to do so.

Accordingly, since there is no motivation to make the proposed combination and since the prior art teaches away from the proposed combination, it would not be obvious to combine *Ide* with *Lapidot* in the manner the Examiner proposes. Appellants respectfully submit that the Examiner's conclusions set forth in the Office Action do not meet the requirements set forth in the M.P.E.P. and the governing Federal Circuit case law for demonstrating a *prima facie* case of obviousness.

Because the proposed combination does not disclose each element of each claim as discussed above in Section I.A and because the proposed combination is improper as discussed above in Section I.B, Appellants respectfully submit that Claims 1, 10, 16, and 20 are patentable over the cited art used in the rejections and request that the Board overturn the rejections of these claims.

Claims 2, 5, 7, and 9 each depends from Claim 1, Claims 11 and 14-15 each depends from Claim 10, and Claims 17-19 each depends from Claim 16. Thus, for at least the reasons discussed above with respect to Claims 1, 10, and 16, Appellants respectfully request that the Board overturn the rejections of Claims 2, 5, 7, 9, 11, 14-15, and 17-19.

II. Claims 3 and 12 are patentable over *Ide-Lapidot*

Claim 3 (which depends from Claim 2) recites that the mode selection trigger comprises a change in a state of the device and that "the change in the state of the device occurs when the device switches from a first application to a second application." Claim 12 recites similar elements. In addition to being allowable for depending from Claim 1 discussed above with respect to the improper *Ide-Lapidot* combination, the Office Action merely cites to Figure 1 and Figure 16 of *Ide* as disclosing these elements. *See* Office Action, pp. 4-5. However, neither these figures, their related description, nor any other portion of *Ide* discloses that a switch from a first application to a second application is a mode selection trigger that triggers the switch between the first mode of motion input operation and the second mode of motion input operation. *Ide* only discloses that the switching between its pointer function and motion pattern input function "may be set on the mouse side or specified on the control target device side" or by pressing a "motion input start button." *Ide*, col. 15, lines 39-42 and col. 22, lines 28-32. There is ***no disclosure*** that ***a switch from a first application to a second application triggers the change in motion input modes***. Therefore, for at least this additional reason, Appellants respectfully submit that Claims 3 and 12 are patentable over the cited art used in the rejections and request that the Board overturn these rejections.

III. Claims 4 and 13 are patentable over *Ide-Lapidot*

Claim 4 (which depends from Claim 2) recites that the mode selection trigger comprises a change in a state of the device and that "the change in the state of the device occurs when the current image switches from a first image to a second image." Claim 13 recites similar elements. These claims are allowable for depending from Claim 1 discussed above with respect to the improper *Ide-Lapidot* combination. In addition, as indicated above in the discussion of Claims 3 and 12, *Ide* merely discloses that the switching between its pointer function and motion pattern input function may be set on the mouse side or specified on the control target device side or by pressing a motion input start button. *See Ide*, col. 15, lines 39-42 and col. 22, lines 28-32. There is ***no disclosure*** that ***a switch from a first image***

to a second image triggers the change in motion input modes. Therefore, for at least this additional reason, Appellants respectfully submit that Claims 4 and 13 are patentable over the cited art used in the rejections and request that the Board overturn these rejections.

IV. Claim 6 is patentable over *Ide-Lapidot*

Claim 6 recites that the mode selection trigger comprises one of the gestures. This claim is allowable for depending from Claim 1 discussed above with respect to the improper *Ide-Lapidot* combination. In addition, the Office Action cites to column 22, lines 31-32 of *Ide* as disclosing this element. *See* Office Action, page 4. However, this cited portion merely discloses the operation of changing from a pointer function to a motion input function as placing the cursor in a certain position, pressing a motion input start button, and making predetermined simple movements such as waving up and down several times. *See Ide*, col. 22, lines 28-32. There is ***no disclosure of an actual gesture for triggering a switch in motion input modes.*** Therefore, for at least this additional reason, Appellants respectfully submit that Claim 6 is patentable over the cited art used in the rejections and request that the Board overturn this rejection.

V. Claim 8 is patentable over *Ide-Lapidot*

Claim 8 recites that the display control module has a third mode of operation "to disregard the motion of the device." This claim is allowable for depending from Claim 1 discussed above with respect to the improper *Ide-Lapidot* combination. In addition, the Office Action cites to portions of *Lapidot* as disclosing this element. *See* Office Action, page 4. However, to make the rejection of Claim 1, the Office Action relies on modifying *Ide* to place a display on the handheld device of *Ide*. *Ide* is solely directed to a "spatial control mouse" to control a cursor on, for example, a laptop or to control another device through motion. Having a mode of operation that ***disregards*** motion of the spatial control mouse of *Ide* ***clearly teaches away*** from *Ide*'s disclosure and would make *Ide* unsatisfactory for its intended purpose, which is to control equipment through motion input. Therefore, for at least

this additional reason, Appellants respectfully submit that Claim 8 is patentable over the cited art used in the rejections and request that the Board overturn this rejection.

CONCLUSION

Appellants have demonstrated that the present invention, as claimed, is clearly distinguishable over the prior art cited by the Examiner. Therefore, Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the Examiner's final rejection of the pending claims and instruct the Examiner to issue a notice of allowance of all pending claims.

The Commissioner is hereby authorized to charge \$510.00 in payment for this Appeal Brief, any other fee and credit any overpayment, to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,
BAKER BOTTS L.L.P.
Attorneys for Appellants



Chad C. Walters
Reg. No. 48,022

Date: July 7, 2008

CORRESPONDENCE ADDRESS:

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Appendix A: Claims on Appeal

1. (Previously Presented) A motion controlled handheld device comprising:
 - a display having a viewable surface and operable to generate a current image;
 - a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device;
 - a gesture mapping database comprising a mapping of each of the gestures to an associated command;
 - a motion detection module operable to detect motion of the device within three dimensions and to identify components of the motion in relation to the viewable surface;
 - a display control module having a first mode of motion input operation and a second mode of motion input operation;
 - the display control module operable in the first mode of motion input_operation to monitor the motion of the device, to determine a location of the device resulting from the motion, and to modify the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device;
 - the display control module operable in the second mode of motion input operation to monitor the motion of the device, to track movement of the handheld device using the motion detection module, the tracked movement identifying a path traveled by the device, to compare the path with the gestures to identify a matching gesture, to identify one of the commands associated with the matching gesture, and to modify the current image based on the identified command; and
 - a mode selection module operable to detect a mode selection trigger and to switch between the first mode of motion input operation and the second mode of motion input operation in response to detecting the mode selection trigger.
2. (Original) The motion controlled handheld device of Claim 1, wherein the mode selection trigger comprises a change in a state of the device.
3. (Original) The motion controlled handheld device of Claim 2, wherein the change in the state of the device occurs when the device switches from a first application to a second application.

4. (Original) The motion controlled handheld device of Claim 2, wherein the change in the state of the device occurs when the current image switches from a first image to a second image.

5. (Previously Presented) The motion controlled handheld device of Claim 1, wherein the mode selection module switches from the first mode of motion input operation to the second mode of motion input operation in response to detecting a first mode selection trigger, and the mode selection module switches from the second mode of motion input operation to the first mode of motion input operation in response to detecting a second mode selection trigger different than the first mode selection trigger.

6. (Original) The motion controlled handheld device of Claim 1, wherein the mode selection trigger comprises one of the gestures.

7. (Original) The motion controlled handheld device of Claim 1, wherein the mode selection trigger comprises non-motion related input received using a user interface of the device.

8. (Original) The motion controlled handheld device of Claim 1, wherein:
the display control module has a third mode of operation;
the display control module operable in the third mode of operation to disregard the motion of the device.

9. (Previously Presented) The motion controlled handheld device of Claim 1, further comprising:

a first accelerometer operable to detect acceleration along a first axis;
a second accelerometer operable to detect acceleration along a second axis, the second axis perpendicular to the first axis; and
a third accelerometer operable to detect acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis; and wherein:

the gesture database further defines each of the gestures using a sequence of accelerations;

the motion detection module is further operable to detect motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

the display control module is further operable, in the second mode of motion input operation, to match the accelerations measured by the motion detection module against gesture definitions in the gesture database to identify particular ones of the gestures.

10. (Previously Presented) A method for controlling a handheld device comprising:

generating a current image on a viewable surface of the handheld device;

maintaining a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device;

maintaining a gesture mapping database comprising a mapping of each of the gestures to an associated command;

detecting motion of the device within three dimensions;

identifying components of the motion in relation to the viewable surface;

in a first mode of motion input operation, monitoring the motion of the device, determining a location of the device resulting from the motion, and modifying the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device;

in a second mode of motion input operation monitoring the motion of the device, tracking movement of the handheld device, comparing the tracked movement with the gestures to identify a matching gesture, identifying one of the commands associated with the matching gesture, and modifying the current image based on the identified command;

detecting a mode selection trigger; and

switching between the first mode of motion input_operation and the second mode of motion input_operation in response to detecting the mode selection trigger.

11. (Original) The method of Claim 10, wherein the mode selection trigger comprises a change in a state of the device.

12. (Original) The method of Claim 11, wherein the change in the state of the device occurs when the device switches from a first application to a second application.

13. (Original) The method of Claim 11, wherein the change in the state of the device occurs when the current image switches from a first image to a second image.

14. (Original) The method of Claim 10, further comprising, in a third mode of operation, disregarding the motion of the device.

15. (Original) The method of Claim 10, wherein the gesture database further defines each of the gestures using a sequence of accelerations; the method further comprising:

detecting acceleration along a first axis;

detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

16. (Previously Presented) Logic for controlling a handheld device, the logic embodied as a computer program stored on a computer readable medium and operable when executed to perform the steps of:

- generating a current image on a viewable surface of the handheld device;
- maintaining a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device;
- maintaining a gesture mapping database comprising a mapping of each of the gestures to an associated command;
- detecting motion of the device within three dimensions;
- identifying components of the motion in relation to the viewable surface;
- in a first mode of motion input operation, monitoring the motion of the device, determining a location of the device resulting from the motion, and modifying the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device;
- in a second mode of motion input operation monitoring the motion of the device, tracking movement of the handheld device, comparing the tracked movement with the gestures to identify a matching gesture, identifying one of the commands associated with the matching gesture, and modifying the current image based on the identified command;
- detecting a mode selection trigger; and
- switching between the first mode of motion input operation and the second mode of motion input operation in response to detecting the mode selection trigger.

17. (Original) The logic of Claim 16, wherein the mode selection trigger comprises a change in a state of the device.

18. (Original) The logic of Claim 16, further operable when executed to perform the step of, in a third mode of operation, disregarding the motion of the device.

19. (Original) The logic of Claim 16, wherein the gesture database further defines each of the gestures using a sequence of accelerations; the logic further operable when executed to perform the steps of:

detecting acceleration along a first axis;

detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

20. (Previously Presented) A motion controlled handheld device comprising:

- means for generating a current image on a viewable surface of the handheld device;
- means for maintaining a gesture database maintaining a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device;
- means for maintaining a gesture mapping database comprising a mapping of each of the gestures to an associated command;
- means for detecting motion of the device within three dimensions;
- means for identifying components of the motion in relation to the viewable surface;
- means for, in a first mode of motion input operation, monitoring the motion of the device, determining a location of the device resulting from the motion, and modifying the current image based on the resulting location of the device as compared to an initial location of the device prior to the motion of the device;
- means for, in a second mode of motion input operation monitoring the motion of the device, tracking movement of the handheld device, comparing the tracked movement with the gestures to identify a matching gesture, identifying one of the commands associated with the matching gesture, and modifying the current image based on the identified command;
- means for detecting a mode selection trigger; and
- means for switching between the first mode of motion input operation and the second mode of motion input operation in response to detecting the mode selection trigger.

ATTORNEY DOCKET NO.
073338.0187
(04-50459 FLA)

PATENT APPLICATION
10/807,561

30

Appendix B: Evidence

NONE

ATTORNEY DOCKET NO.
073338.0187
(04-50459 FLA)

PATENT APPLICATION
10/807,561

31

Appendix C: Related Proceedings

NONE